DES
DEPARTMENT OF ENVIRONMENT AND SUSTAINABILITY
air quality desert conservation PROGRAM sustainability

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PORTABLE MINOR SOURCE TECHNICAL SUPPORT DOCUMENT

SOURCE NAME:
Las Vegas Paving Corporation – Portable #4

SOURCE ID:
18091

SOURCE LOCATION:
4420 South Decatur Boulevard
Las Vegas, Nevada 89013

COMPANY NAME:
Las Vegas Paving Corporation

APPLICATION PREPARED BY:
Las Vegas Paving Corporation

CURRENT ACTION:
New

APPLICATION RECEIVED:
March 2, 2021

TSD Date: June 7, 2021

ACRONYMS AND ABBREVIATIONS

(These terms may be seen in the technical support document)

AQR	Clark County Air Quality Regulation
CE	control efficiency
CF	control factor
CFR	Code of Federal Regulations
CO	carbon monoxide
DAQ	Division of Air Quality
DES	Department of Environment and Sustainability
DOM	date of manufacture
EF	emission factor
EI	emission increase
EPA	U.S. Environmental Protection Agency
EU	emission unit
HP	horsepower
H_2S	hydrogen sulfide
kW	kilowatt
NAICS	North American Industry Classification System
NO_x	nitrogen oxide
NSPS	New Source Performance Standards
Pb	lead
$PM_{2.5}$	particulate matter less than 2.5 microns in aerodynamic diameter
PM_{10}	particulate matter less than 10 microns in aerodynamic diameter
PSD	Prevention of Significant Deterioration
PTE	potential to emit
RACT	reasonably available control technology
RICE	reciprocating internal combustion engine
SCC	Source Classification Codes
SIC	Standard Industrial Classification
SO_2	sulfur dioxide
TSD	Technical Support Document
VMT	vehicle miles traveled
VOC	volatile organic compound

Technical Support Document

This TSD establishes the methodology related to the terms and conditions of its Minor Source Permit, issued pursuant to Clark County Department of Air Quality Regulations (AQR) Section 12.1. The TSD shall not serve as the operating authority.

Source Description

Las Vegas Paving Corporation is a portable crushing and screening plant, operating in various locations throughout Clark County. As a portable crushing and screening plant, Las Vegas Paving Corporation is classified under SIC code 1422, "Sand and Gravel" and NAICS code 212321, "Construction Sand and Gravel Mining."

Las Vegas Paving Corporation is a minor source of all regulated air pollutants, enforced by the Division of Air Quality. In addition, the source is subject to the federal regulations of 40 CFR Part 60 Subpart OOO, 40 CFR Part 60 Subpart IIII, and 40 CFR Part 63 Subpart ZZZZ.

Permitting Action

The permitting action for this source is a new AQR 12.1 minor source permit.

Emission Units

Table 1 is a comprehensive list of the emission units at this portable source.

Table 1. List of Emission Units

EU	Rating	Description	Make	MN	SN	SCC
Crushing and Screening Plant						
A01	200 TPH	HSI Crusher (with underbelt)	Cedarapids	1300	54416	30502510
A02		Conveyor (to ground)				30502503
A03		Conveyor (to screen)				30502503
A04	450 TPH	Screen	JCI	FT62030C	P060334	30502511
A05	150 TPH	Cone Crusher (with underbelt)	JCI	FT300	P060364	30502510
A06		Conveyor System (2 belts)				30502503
A07		Conveyor (to ground)				30502503
A08		Conveyor (to ground)				30502503
A09		Conveyor System (4 belts)				30502503
A10		Stacker				30502505
A11		Stacker				30502505
A12		Truck Loadout				30502506
Fugitives						
A13	10.0 acres	Stockpiles				30502507
A14	0.50 mile RT	Unpaved Haul Road				30502504
Power Generation						
B01	400 hp	Continuous-Duty Generator Diesel Engine DOM 2007	Cummins	QSM11	31014899	20200102
B02	173 hp	Continuous-Duty Generator Diesel Engine DOM 2012	John Deere	4045HF475	PE4045H 887756	20200102
B03	425 hp	Continuous-Duty Generator Diesel Engine DOM 5/2006	John Deere	6125HF070	RG6125H 055549	20200102

EU	Rating	Description	Make	MN	SN	SCC
B04	134 hp	Continuous-Duty Generator Diesel Engine DOM 1995	CAT	CT3304	9HK00068	20200102

Calculation of Emissions

Applicability

The Division of Air Quality (DAQ) has made a predetermination that all mineral processing plants, with emissions calculated using the DAQ Aggregate Tool, exceed the threshold of applicability for PM_{10} – 5 tons per year.

As a result, Las Vegas Paving Corporation – Portable #4 is required to have an air quality permit for the operation of its portable crushing and screening plant.

Status Determination Emissions

The emissions for source status are calculated by "operating" the source at 8,760 hours per year and applying a control efficiency of 90 percent (i.e., moisture) to the mineral processing equipment. However, fugitive emissions (i.e., haul road and stockpiles) are not taken into account when determining the emissions for source status.

With these conditions in place, Las Vegas Paving emits 66.08 tons per year of PM_{10}, 15.49 tons per year of $PM_{2.5}$, 68.73 tons per year of NO_x, 12.85 tons per year of CO, 0.06 tons per year of SO_2, and 4.82 tons per year of VOC. All of these values are below each respective threshold for major source status (see Table 2), which means Las Vegas Paving will be classified as a true minor source for all regulated air pollutants. The calculations to determine source status emissions are provided as attachments at the end of this technical support document.

Table 2. Status Determination Emissions (tons per year)

Pollutant	PM_{10}	$PM_{2.5}$	NO_x	CO	SO_2	VOC	HAP[1]
Major Source Thresholds	100	100	100	100	100	100	10/25
Nonattainment NSR	100	100	100	100	100	100	none
PSD Thresholds	250	250	250	250	250	250	none
SDE	**66.08**	**15.49**	**68.73**	**12.85**	**0.06**	**4.82**	**0.14**

[1]10 tons for any single HAP or 25 tons for any combination of HAP pollutants.

HAP emissions are also evaluated during the calculation of source status emissions because it is considered a regulated air pollutant. However, the Division of Air Quality (DAQ) has determined that the calculated and/or estimated HAP emissions from this source fall below the AQR 12.1 permitting threshold. Therefore, a specific PTE will not be included in the permit, but any applicable NESHAP and/or MACT requirements will be included in the air quality permit.

PTE

PTE is based on the throughput, proposed by the source. PTE includes fugitive emissions from stockpiles and haul roads. Table 3 shows the PTE associated with this source, with calculations provided as attachments at the end of this technical support document.

Table 3. PTE (tons per year)

Pollutant	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	H_2S	Pb
PTE	26.10	4.62	15.69	2.94	0.04	1.10	0	0

Emission Increase

For this permitting action, Las Vegas Paving has an emission increase of 26.10 tons per year of PM_{10}. This value is above the respective threshold for significance (see Table 4), which means Las Vegas Paving is subject to a RACT analysis.

Table 4. Emissions Increase Calculation and Significance Evaluation (tons per year)

Affected EU	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	H_2S	Pb
Proposed PTE	26.10	4.62	15.69	2.94	0.04	1.10	0	0
Permitted PTE	0	0	0	0	0	0	0	0
Δ Emissions	26.10	4.62	15.69	2.94	0.04	1.10	0	0
Significance Threshold	**7.5**	**7.5**	**20**	**35**	**40**	**20**	**5**	**0.6**
RACT Analysis Required	Yes	No	No	No	No	No	NA	NA

Control Technology

Las Vegas Paving will maintain a moisture control efficiency of at least 90 percent while the mineral processing equipment is in operation. This control is accepted as RACT for PM_{10}.

The continuous-duty generators (EU: B01-B04) are each equipped with a turbocharger and aftercooler.

These control measures will satisfy the requirements of RACT for a portable crushing and screening operation.

Operational Limits

Las Vegas Paving has proposed the operational limits, listed below in Table 5.

Table 5. Proposed Operational Limits

EU	Description	Annual Throughput
A01 – A12	Crushing and Screening Plant	500,000 tons
A13	Stockpiles	10.0 acres
A14	Unpaved Haul Road	30,000 miles
B01	Continuous-Duty Generator	2,000 hours
B02	Continuous-Duty Generator	2,000 hours
B03	Continuous-Duty Generator	2,000 hours
B04	Continuous-Duty Generator	2,000 hours

Review of Applicable Regulations

Mineral Processing Equipment

The impact crusher (EU: A01) has a rating of 200 tons per hour, which is above the threshold of applicability for a portable crushing and screening operation – 150 tons per year. As a result, the mineral processing equipment at Las Vegas Paving is subject to the federal requirements of 40 CFR Part 60 Subpart OOO.

Continuous-Duty Engines

The continuous-duty diesel generators (EU: B01-B03) were each manufactured after the date of applicability – April 1, 2006. As a result, these emission units are subject to the federal requirements of 40 CFR Part 60 Subpart IIII and 40 CFR Part 63 Subpart ZZZZ. However, (EU: B01-B03) will meet all of the federal requirements of 40 CFR Part 63 Subpart ZZZZ, by adhering to the federal requirements of 40 CFR Part 60 Subpart IIII.

The continuous-duty generator (EU: B04) was manufactured before the date of applicability – April 1, 2006. As a result this emission unit is not subject to the federal requirements of 40 CFR Part 60 Subpart IIII. Instead, this emission unit is subject to the federal requirements of 40 CFR Part 63 Subpart ZZZZ.

In addition, the permittee shall comply with the emissions standards in 40 CFR Part 89.112–113 for the applicable compression ignition engine(s) for the same model year and maximum engine power, provided in Table 6.

Table 6. Emission Standards for Continuous-Duty Diesel Generator

EU	Power	PM (g/kW-hr)	CO (g/kW-hr)	NMHC+NO_x (g/KW-hr)
B01	225 ≤ kW < 450	0.20	3.50	4.00
B02	75 ≤ kW < 130	0.30	5.00	4.00
B03	225 ≤ kW < 450	0.20	3.50	4.00

Monitoring

Standard monitoring requirements for opacity, engines, and mineral processing equipment will be included in the air quality permit.

Performance Testing

Applicable mineral processing equipment is subject to the performance testing requirements, outlined in 40 CFR Part 60 Subpart OOO.

Increment Analysis

An increment analysis is not required for a portable source, unless the source operates at one location for a period of more than 24 consecutive months.

Public Participation

This permitting action will be posted on the department's website for the general public to view and comment, pursuant to AQR 12.1.5.3(a)(1)(D) – a new portable source.

Attachment 1. PM_{10} Emissions for Source Status

EU	Rating	Description	Throughput	EF	CF	PTE
			tons/yr	(lb/ton)		tons/yr
A01	200 TPH	HSI Crusher (with underbelt)	1,752,000	0.13	0.10	11.39
A02	2 TPH	Conveyor (to ground)	17,520	0.01	0.10	0.01
A03	198 TPH	Conveyor (to screen)	1,734,480	0.01	0.10	0.87
A04	450 TPH	Screen	3,942,000	0.08	0.10	15.77
A05	150 TPH	Cone Crusher (with underbelt)	1,314,000	0.13	0.10	8.54

EU	Rating	Description	Throughput	EF	CF	PTE
			tons/yr	(lb/ton)		tons/yr
A06	150 TPH	Conveyor (recirc)	1,314,000	0.01	0.10	0.66
A06	150 TPH	Conveyor (recirc)	1,314,000	0.01	0.10	0.66
A07	2.5 TPH	Conveyor (to ground)	21,900	0.01	0.10	0.01
A08	2.5 TPH	Conveyor (to ground)	21,900	0.01	0.10	0.01
A09	350 TPH	Conveyor	3,066,000	0.01	0.10	1.53
A09	350 TPH	Conveyor	3,066,000	0.01	0.10	1.53
A09	350 TPH	Conveyor	3,066,000	0.01	0.10	1.53
A09	350 TPH	Conveyor	3,066,000	0.01	0.10	1.53
A10	350 TPH	Stacker	3,066,000	0.04	0.10	6.13
A11	350 TPH	Stacker	3,066,000	0.04	0.10	6.13
A12	350 TPH	Truck Loadout	3,066,000	0.04	0.10	6.13
PM_{10} Subtotal						62.43

Attachment 2. $PM_{2.5}$ Emissions for Source Status

EU	Rating	Description	Throughput	EF	CF	PTE
			tons/yr	(lb/ton)		tons/yr
A01	200 TPH	HSI Crusher (with underbelt)	1,752,000	0.025	0.10	2.19
A02	2 TPH	Conveyor (to ground)	17,520	0.003	0.10	0.01
A03	198 TPH	Conveyor (to screen)	1,734,480	0.003	0.10	0.26
A04	450 TPH	Screen	3,942,000	0.006	0.10	1.18
A05	150 TPH	Cone Crusher (with underbelt)	1,314,000	0.025	0.10	1.64
A06	150 TPH	Conveyor (recirc)	1,314,000	0.003	0.10	1.64
A06	150 TPH	Conveyor (recirc)	1,314,000	0.003	0.10	1.64
A07	2.5 TPH	Conveyor (to ground)	21,900	0.003	0.10	0.01
A08	2.5 TPH	Conveyor (to ground)	21,900	0.003	0.10	0.01
A09	350 TPH	Conveyor	3,066,000	0.003	0.10	0.46
A09	350 TPH	Conveyor	3,066,000	0.003	0.10	0.46
A09	350 TPH	Conveyor	3,066,000	0.003	0.10	0.46
A09	350 TPH	Conveyor	3,066,000	0.003	0.10	0.46

EU	Rating	Description	Throughput tons/yr	EF (lb/ton)	CF	PTE tons/yr
A10	350 TPH	Stacker	3,066,000	0.011	0.10	1.69
A11	350 TPH	Stacker	3,066,000	0.011	0.10	1.69
A12	350 TPH	Truck Loadout	3,066,000	0.006	0.10	0.92
PM_{10} Subtotal						11.84

Attachment 3. Emissions for Source Status (EU: B01)

					Emission Factor	Potential Emissions		
EU#	B01	**Horsepower:**	400		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Make:		**Hours/Day:**	24.0	**PM10**	1.32E-04	0.05	1.26	0.23
Model:		**Hours/Year**	8760	**NOx**	5.15E-03	2.06	49.48	9.03
S/N:				**CO**	9.86E-04	0.39	9.47	1.73
Manufacturer Guarantees				**SO_2**	1.21E-05	0.01	0.12	0.02
PM10	0.08	g/kW-hr		**VOC**	2.71E-04	0.11	2.60	0.48
NOx	3.135	g/kW-hr		**HAP**	2.71E-05	0.01	0.26	0.05
CO	0.6	g/kW-hr						
SO_2		g/kW-hr						
VOC	0.165	g/kW-hr						
Engine Type:	Diesel			Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

*based on certified CARB standards, except for SO_2 (AP-42)

Attachment 4. Emissions for Source Status (EU: B02)

					Emission Factor	Potential Emissions		
EU#	B02	**Horsepower:**	173		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Make:		**Hours/Day:**	24.0	**PM10**	2.20E-03	0.38	9.13	1.67
Model:		**Hours/Year**	8760	**NOx**	3.10E-02	5.36	128.71	23.49
S/N:				**CO**	6.68E-03	1.16	27.74	5.06
Manufacturer Guarantees				**SO_2**	1.21E-05	0.01	0.05	0.01
PM10		g/kW-hr		**VOC**	2.51E-03	0.43	10.44	1.91
NOx		g/kW-hr		**HAP**	2.71E-05	0.01	0.11	0.02
CO		g/kW-hr						
SO_2		g/kW-hr						
VOC		g/kW-hr						
Engine Type:	Diesel			Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

*based on emission factors from (AP-42)

Attachment 5. Emissions for Source Status (EU: B03)

						Emission Factor	Potential Emissions		
EU#	B03		**Horsepower:**	425		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Make:			**Hours/Day:**	24.0	**PM10**	2.47E-04	0.10	2.52	0.46
Model:			**Hours/Year**	8760	**NOx**	9.68E-03	4.12	98.77	18.02
S/N:					**CO**	1.15E-03	0.49	11.74	2.14
					SO_2	1.21E-05	0.01	0.12	0.02
Manufacturer Guarantees					**VOC**	5.10E-04	0.22	5.20	0.95
PM10	0.15	g/kW-hr			**HAP**	2.71E-05	0.01	0.28	0.05
NOx	5.89	g/kW-hr							
CO	0.7	g/kW-hr							
SO_2		g/kW-hr							
VOC	0.31	g/kW-hr							
Engine Type:	Diesel				Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

*based on certified CARB standards, except for SO_2 (AP-42)

Attachment 6. Emissions for Source Status (EU: B04)

						Emission Factor	Potential Emissions		
EU#	B04		**Horsepower:**	134		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Make:			**Hours/Day:**	24.0	**PM10**	2.20E-03	0.29	7.08	1.29
Model:			**Hours/Year**	8760	**NOx**	3.10E-02	4.15	99.70	18.19
S/N:					**CO**	6.68E-03	0.90	21.48	3.92
					SO_2	1.21E-05	0.01	0.04	0.01
Manufacturer Guarantees					**VOC**	2.51E-03	0.34	8.09	1.48
PM10		g/kW-hr			**HAP**	2.71E-05	0.01	0.09	0.02
NOx		g/kW-hr							
CO		g/kW-hr							
SO_2		g/kW-hr							
VOC		g/kW-hr							
Engine Type:	Diesel				Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

*based on emission factors from (AP-42)

Attachment 7. Emissions for Source Status – Summary

PM_{10}	$PM_{2.5}$	NO_x	CO	SO_2	VOC	HAP	H_2S	Pb
66.08	15.49	68.73	12.85	0.06	4.82	0.14	0	0

*does not include fugitive emissions from stockpiles and/or haul roads

Attachment 8. Source PTE of PM_{10}

EU	Rating	Description	Throughput tons/yr	EF (lb/ton)	CF	PTE tons/yr
A01	200 TPH	HSI Crusher (with underbelt)	500,000	0.13	0.10	3.25
A02		Conveyor (to ground)	5,000	0.01	0.10	0.01
A03		Conveyor (to screen)	495,000	0.01	0.10	0.25
A04	450 TPH	Screen	495,000	0.08	0.10	1.98
A05	150 TPH	Cone Crusher (with underbelt)	99,000	0.13	0.10	0.64
A06		Conveyor (recirc)	99,000	0.01	0.10	0.05
A06		Conveyor (recirc)	99,000	0.01	0.10	0.05
A07		Conveyor (to ground)	5,940	0.01	0.10	0.01
A08		Conveyor (to ground)	5,940	0.01	0.10	0.01
A09		Conveyor	582,120	0.01	0.10	0.29
A09		Conveyor	582,120	0.01	0.10	0.29
A09		Conveyor	582,120	0.01	0.10	0.29
A09		Conveyor	582,120	0.01	0.10	0.29
A10		Stacker	582,120	0.04	0.10	1.16
A11		Stacker	582,120	0.04	0.10	1.16
A12		Truck Loadout	582,120	0.04	0.10	1.16
PM_{10} Subtotal						10.89

Attachment 9. Source PTE of $PM_{2.5}$

EU	Rating	Description	Throughput tons/yr	EF (lb/ton)	CF	PTE tons/yr
A01	200 TPH	HSI Crusher (with underbelt)	500,000	0.025	0.10	0.63
A02		Conveyor (to ground)	5,000	0.003	0.10	0.01
A03		Conveyor (to screen)	495,000	0.003	0.10	0.07
A04	450 TPH	Screen	495,000	0.006	0.10	0.15
A05	150 TPH	Cone Crusher (with underbelt)	99,000	0.025	0.10	0.12
A06		Conveyor (recirc)	99,000	0.003	0.10	0.01
A06		Conveyor (recirc)	99,000	0.003	0.10	0.01
A07		Conveyor (to ground)	5,940	0.003	0.10	0.01
A08		Conveyor (to ground)	5,940	0.003	0.10	0.01
A09		Conveyor	582,120	0.003	0.10	0.09
A09		Conveyor	582,120	0.003	0.10	0.09
A09		Conveyor	582,120	0.003	0.10	0.09
A09		Conveyor	582,120	0.003	0.10	0.09
A10		Stacker	582,120	0.011	0.10	0.32
A11		Stacker	582,120	0.011	0.10	0.32
A12		Truck Loadout	582,120	0.006	0.10	0.17
$PM_{2.5}$ Subtotal						2.19

Attachment 10. Source PTE of PM_{10} – Fugitives

EU	Rating	Description	Throughput tons/yr	EF (lb/ton)	CF	PTE tons/yr
A13	10.0 acre	Stockpiles	1.66 lb / acre-day			3.03
A14	0.50 mile RT	Unpaved Haul Road	30,000 VMT	7.57 lb/VMT	0.10	11.36
PM_{10} Subtotal						14.39

Attachment 11. Source PTE of $PM_{2.5}$ – Fugitives

EU	Rating	Description	Throughput tons/yr	EF (lb/ton)	CF	PTE tons/yr
A13	10.0 acre	Stockpiles	0.25 lb / acre-day			0.46
A14	0.50 mile RT	Unpaved Haul Road	30,000 VMT	0.767 lb/VMT	0.10	1.15
$PM_{2.5}$ Subtotal						1.61

Attachment 12. Source PTE – (EU: B01)

					Emission Factor	Potential Emissions		
EU#	B01	**Horsepower:**	400		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Make:		**Hours/Day:**	24.0	**PM10**	1.32E-04	0.05	1.26	0.05
Model:		**Hours/Year**	2000	**NOx**	5.15E-03	2.06	49.48	2.06
S/N:				**CO**	9.86E-04	0.39	9.47	0.39
Manufacturer Guarantees				**SO_2**	1.21E-05	0.01	0.12	0.01
PM10	0.08	g/kW-hr		**VOC**	2.71E-04	0.11	2.60	0.11
NOx	3.135	g/kW-hr		**HAP**	2.71E-05	0.01	0.26	0.01
CO	0.6	g/kW-hr						
SO_2		g/kW-hr						
VOC	0.165	g/kW-hr						
Engine Type:	Diesel			Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

*based on certified CARB standards, except for SO_2 (AP-42)

Attachment 13. Source PTE – (EU: B02)

					Emission Factor	Potential Emissions		
EU#	B02	**Horsepower:**	173		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Make:		**Hours/Day:**	24.0	**PM10**	2.20E-03	0.38	9.13	0.38
Model:		**Hours/Year**	2000	**NOx**	3.10E-02	5.36	128.71	5.36
S/N:				**CO**	6.68E-03	1.16	27.74	1.16
Manufacturer Guarantees				**SO_2**	1.21E-05	0.01	0.05	0.01
PM10		g/kW-hr		**VOC**	2.51E-03	0.43	10.44	0.43
NOx		g/kW-hr		**HAP**	2.71E-05	0.01	0.11	0.01
CO		g/kW-hr						
SO_2		g/kW-hr						
VOC		g/kW-hr						
Engine Type:	Diesel			Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

*based on emission factors from (AP-42)

Attachment 14. Source PTE – (EU: B03)

						Emission Factor	Potential Emissions		
EU#	B03		**Horsepower:**	425		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Make:			**Hours/Day:**	24.0	**PM10**	2.47E-04	0.10	2.52	0.10
Model:			**Hours/Year**	2000	**NOx**	9.68E-03	4.12	98.77	4.12
S/N:					**CO**	1.15E-03	0.49	11.74	0.49
					SO_2	1.21E-05	0.01	0.12	0.01
Manufacturer Guarantees					**VOC**	5.10E-04	0.22	5.20	0.22
PM10	0.15	g/kW-hr			**HAP**	2.71E-05	0.01	0.28	0.01
NOx	5.89	g/kW-hr							
CO	0.7	g/kW-hr							
SO_2		g/kW-hr							
VOC	0.31	g/kW-hr							
Engine Type:	Diesel				Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

*based on certified CARB standards, except for SO_2 (AP-42)

Attachment 15. Source PTE – (EU: B04)

						Emission Factor	Potential Emissions		
EU#	B04		**Horsepower:**	134		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Make:			**Hours/Day:**	24.0	**PM10**	2.20E-03	0.29	7.08	0.29
Model:			**Hours/Year**	2000	**NOx**	3.10E-02	4.15	99.70	4.15
S/N:					**CO**	6.68E-03	0.90	21.48	0.90
					SO_2	1.21E-05	0.01	0.04	0.01
Manufacturer Guarantees					**VOC**	2.51E-03	0.34	8.09	0.34
PM10		g/kW-hr			**HAP**	2.71E-05	0.01	0.09	0.01
NOx		g/kW-hr							
CO		g/kW-hr							
SO_2		g/kW-hr							
VOC		g/kW-hr							
Engine Type:	Diesel				Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

*based on emission factors from (AP-42)

Attachment 16. Source PTE – Summary

PM_{10}	$PM_{2.5}$	NO_x	CO	SO_2	VOC	H_2S	Pb
26.10	4.62	15.69	2.94	0.04	1.10	0	0

*includes fugitive emissions from stockpiles and/or haul roads